

SOME NEW GENERA AND SPECIES OF LONCHAEIDAE AND SAPROMYZIDAE (DIPTERA).

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The types of the species described in this paper are deposited in the United States National Museum unless stated otherwise in the text.

Lonchaeidae.***Lonchaea arkansensis*, sp. n.**

Male.—Blackish blue, glossy, abdomen with a bronzy tinge. Frons shining blue, lunule, face and cheeks silvery; antennae and palpi fuscous. Legs black, basal 2 or 3 segments of tarsi rufous yellow. Wings clear, veins yellowish. Calypterae and fringes white. Halteres black.

Eyes bare; some setulae above orbital bristle, frons with rather strong hairs; antennae short, separated by length of second segment, third not twice as long as wide, not reaching mouth; arista subnude; cheek with about 3 strong bristles anteriorly. A weaker pair of acrostichals in front of the strong prescutellar pair; some hairs at base of stigmal bristle and in center of pteropleura, no hairs on scutellum. Abdomen broad, but little tapered, apical 3 tergites subequal in length. Legs normal. Fringe of calypterae a little longer at angle. Auxiliary and first veins very close apically; inner cross vein just beyond apex of first vein.

Female.—Similar to male, but the frons one-third of the head width, the antennae closer together, the pteropleura bare and no hairs at base of stigmal bristle. The ovipositor is remarkably broad, being almost as wide as frons, with longitudinal striae, the tip sharp, coming to a rather abrupt point, with very short terminal hairs.

Length, 4–5 mm.

Type, male, Hot Springs, Ark., June 21 (H. S. Barber). Allotype, Las Vegas Hot Springs, N. M., June 8 (Barber and Schwarz).

The female may possibly belong to a different species but I consider them conspecific at this time.

***Lonchaea subpolita*, sp. n.**

Female.—Similar in color and general habits to *polita* Say. Differs in having the calypterae brown with fuscous fringes, the second antennal segment is largely reddish brown, as is also the third segment below at base. Tarsi rufous yellow, apically infuscated. Wings yellowish, veins yellow basally.

Upper orbits polished; frons slightly granulose, fine haired; frontal triangle hairy; third antennal segment a little over twice as long as wide; arista subnude; cheek with fine hairs. No extra stigmal hairs; pteropleura bare; some fine hairs between apical pair of scutellar bristles. Ovipositor with 2 exceptionally long hairs at preapical constriction.

Legs as in *polita*. Distance along costa from apex of auxiliary vein to apex of first distinctly more than one-third as great as distance of former from humeral cross-vein; first posterior cell not narrowed apically; inner cross-vein

slightly before apex of auxiliary vein and middle of discal cell. Fringes of calyptrae not very long at angle.

Length, 3.75 mm.

Type, Black Mt., N. C., May, north fork of Swannanoa (Coll. N. Banks).

The preapical dorsal hairs on genitalia of females of *marylandica* and *laticornis* are extremely short as compared with those of *subpolita*.

***Lonchaea occidentalis*, sp. n.**

Male and *Female*.—Similar in color to *polita* Say, the calyptrae white, with white fringes, and the tarsi largely rufous yellow.

Differs from *polita* in having the frons of male much wider, at anterior margin as wide as at least half of the entire length of frons, the upper orbits largely microscopically granulose, the hairs at outer angle of calyptrae much longer than rest of fringe, and the ovipositor with 2 exceptionally long preapical dorsal hairs. In other respects as *polita*. Length, 4-4.5 mm.

Type, male, Flagstaff, Ariz., July 6 (H. S. Barber). Allotype, San Mateo Co., Calif. (Baker). One male paratype, Mt. View (?), Cal. (Ehrhorn), one female paratype, Claremont, Cal. (Baker).

A series of five specimens from diseased *Dasyllirion*, Santa Rita Mts., Arizona, collected by E. A. Schwarz and H. S. Barber, December 8, 1913, and reared by R. S. Shannon, January, 1914, belong also to this species.

Differs from *subpolita*, which has also exceptionally long preapical dorsal hairs on the ovipositor, in having the upper orbits microscopically granulose, the calyptrae white, with white fringes, the distance between auxiliary and first veins about one-sixth as great as distance from the former to humeral cross-vein.

***Lonchaea coloradensis*, sp. n.**

Male.—Similar to the preceding species and *polita* in color.

Differs from *polita* and *occidentalis* in having the third antennal segment about twice instead of at least three times as long as wide. Upper orbits granulose, very narrow, with one or two hairs above the orbital bristle; cheek narrower than third antennal segment, with a series of fine setulose hairs. Fringe of calyptrae uniform. Venation as in *polita*.

Length, 4.5 mm.

Type, Colorado; no other data.

***Lonchaea marylandica*, sp. n.**

Male and *female*.—Glossy blackish blue. Frons subopaque black, the ocellar triangle and upper orbits glossy dark blue; antennae black. Legs black. Calyptrae and their fringes yellowish white. Wings clear, veins yellowish.

Eyes bare; frons of male at anterior margin about as wide as third antennal segment, of female a little less than twice that width, distance from anterior ocellus to anterior margin of frons in female over 1.5 as great as the width at anterior margin; orbital bristle proximad of anterior ocellus; orbits bare above the bristle, smooth; ocellar triangle with much shorter and fewer hairs than in *vaginalis* Fallen; cheek with some moderately long setulose hairs in a single series; third antennal segment about twice as long as wide. Thorax, abdomen, and wings as in *vaginalis* except that there are no fine hairs between the apical pair of scutellar bristles as in that species.

Length, 3.5–4 mm.

Type, male, allotype, and six paratypes collected as larvae under bark, Plummers Island, Md., April 7, 1915, emerged as imagines April 24, 1915 (Barber and Shannon).

Two female paratypes, White Mts., N. H. (Morrison).

Lonchaea atritarsis, sp. n.

Male.—Black, shining, with a bluish tinge on thorax and abdomen. Legs black. Calyptrae brown, fringes black. Wings clear, veins yellowish. Halteres black.

Eyes bare; frons with rather long dense erect hairs, one or two of which are above the anterior orbital bristle; third antennal segment about 2.5 as long as wide; frontal lunule hairy; cheeks with long but not dense setulose hairs. Some long hairs at base of stigmal bristle, the latter not differentiated from them; pteropleura bare; scutellum with hairs only on margins. Tergites of abdomen subequal. Legs slender. Second costal division very short; wing pointed. Fringes of calyptrae of moderate length.

Length, 5 mm.

Type, Kaslo, B. C. (A. N. Caudell).

Sapromyzidae.

Camptoprosopella maculipennis, sp. n.

Female.—Honey yellow, shining. Apex of third antennal segment and ocellar spot black; palpi yellow. Abdomen largely suffused with fuscous. Legs yellow. Costal margin of wing to beyond apex of third vein, except a short space beyond apex of first vein, and the cross-veins broadly brown. Calyptrae and halteres yellowish.

Third antennal segment about 2.5 as long as wide, but little tapered apically. Thorax with three pairs of dorsocentral bristles. Last section of fourth vein about 2.5 as long as preceding section.

Length, 2.5 mm.

Type, Stone Cabin Canyon, Santa Rita Mts., Arizona, August 25, 1913, on *Thurberia thespesoides* (W. D. Pierce).

Trigonometopus Macquart.

This genus contains six described species from North and South America. Of these, two are unknown to me but I have seen the types of three of the others. I present a key for the identification of the species I have seen.

Key to Species.

1. Anterior pair of dorsocentral bristles in front of suture; frons not more than 1.5 as long as wide 2.
- Anterior pair of dorsocentral bristles behind suture; frons at least twice as long as wide 3.
2. Wing with two small round spots on apical section of third vein, and both the cross-veins dark brown *punctipennis* Coquillett.
- Wing immaculate; pleura largely fuscous; prescutellar acrostichals minute *immaculipennis*, sp. n.
3. Dorsum of thorax with four blackish vittae; dorsum of abdomen almost entirely blackened; median dark vitta on wing conspicuous
angustipennis Knab.
- Dorsum of thorax with pale brownish vittae or indistinctly vittate . . . 4
4. Median vitta on wing distinct; dorsum of abdomen with a broad blackish vitta on each side *albifrons* Knab.
- Median vitta on wing very faint; dorsum of abdomen with a narrow centrally interrupted brownish fascia on posterior margin of each segment *vittatus* Loew.

Of the other two species unknown to me *reticulatus* Johnson may be known by the presence of blackish bars between the wing veins and *rotundicornis* Williston by the narrow brown costal margin which extends to apex of fourth vein.

It appears pertinent to state that the African species *setosus* Knab does not belong to this genus though described as belonging here. The presutural thoracic bristle is present in the type specimen which I have examined.

Trigonometopus immaculipennis, sp. n.

Female.—Head yellowish testaceous; face with a gray median vertical stripe; frons with a gray stripe on each side mesad of the orbital bristles which extend forward over the space between the bases of antennae and eyes. Thorax colored as head, the dorsum gray except along the series of dorsocentral bristles and the lateral margins; disc of scutellum and pleurae largely gray. Abdomen, legs, and halteres yellowish testaceous. Wings hyaline, veins dark brown.

Head and eyes but little higher than long; face receding; longest genal bristle below middle of eye; third antennal segment as long as high; arista pubescent; frons longer than wide, with numerous setulose hairs on sides at base of antennae; ocellar bristles minute; postvertical bristles of moderate strength. Venation as in *vittatus*.

Length, 4 mm.

Type, Cayamas, Cuba (E. A. Schwartz).

Xenochaetina, gen. n.

This genus is the only one in the family which has setulae at the base of the second wing vein.

Genotype, *Lauxania muscaria* Loew.

Key to Species.

1. Yellow species, disc of mesonotum posteriorly and the scutellum brownish; fore legs normal; wings not infuscated at bases *pallida* sp. n.
- Black or bluish black species 2.
2. Fore tarsi much thickened, fore legs entirely deep black; face entirely pale gray pruinulent, opaque; wings hyaline *crassimana*, sp. n.
- Fore tarsi but slightly thickened basally; at least the tarsi more or less pale; face glossy black, not pruinulent 3.
3. Wings not blackened at bases *muscaria* Loew.
- Wings blackened at bases *flavipennis* Wiedmann.

Xenochaetina pallida, sp. n.

Male.—Glossy testaceous yellow. Wings yellowish hyaline.

Structurally similar to *muscaria*, but the apical section of fourth vein is distinctly longer than the preceding section whereas in *muscaria* it is almost imperceptibly longer.

Length, 4.5 mm.

Type, Chinandega, Nicaragua. Paratype, Granada, Nicaragua. C. F. Baker, collector.

Xenochaetina crassimana, sp. n.

Male.—Glossy black; face opaque gray pruinulent. Dorsum of thorax faintly gray pruinulent. Antennae brownish. Legs black, mid and hind tibiae, and tarsi yellowish. Wings hyaline.

Face less convex than in other species. Structure and chaetotaxy as in *muscaria*. Fore tarsi much thickened, the basal segment as thick as tibia. Penultimate section of fourth vein about three-fifths as long as ultimate section.

Length, 4.5 mm.

Type, Los Palmes, Venezuela.

Deceia, gen. n.

This genus is distinguished from *Sapromyza* Fallen by having but one strong sternopleural bristle.

Genotype, *Sapromyza crevecoeuri* Coquillett.

Deceia wetmorei, sp. n.

Male.—Head fulvous, frons and occiput largely fuscous above, with whitish pruinulence, so greasy in type that it is not possible to decide its normal coloration. Abdomen fulvous, with more or less fuscous color on dorsum. Legs

whitish yellow, the fore pair paler, apical segment or fore tarsi deep black. Wings yellowish. Halteres yellow.

Frons less than one-third of the head width, both orbital bristles strong, ocellar and postvertical bristles short and weak; hairs on upper side of arista much longer than those on under side; third antennal segment about twice as long as wide; eyes large, very much narrowed below; face slightly convex. Thorax with two pairs of dorsocentrals; prescutellar acrostichals distinct; scutellum with four equal bristles. Fore femur with a series of black posteroventral bristles; fore tibia swollen near base; fore tarsi stout, longer than tibia; preapical tibial bristles weak. Abdomen short and broad, the hypopygium large. Last section of fourth vein about 2.5 as long as preceding section.

Length, 2.5 mm.

Type, Paradise Key, Fla., February 21, 1919 (A. Wetmore).
Named in honor of the collector.

Melanomyza, subgen. n.

Similar to the preceding genus; distinguished from it by the convex glossy face and normal fore tibiae of the males.

Genotype, *Lauxania gracilipes* Loew.

Melanomyza incongrua, sp. n.

Female.—Black, shining. Head with whitish pruinescence above and laterad of the anterior orbital bristle, on the narrow facial orbits, and along margin of eye on lower two-thirds of occiput; frons shining; face glossy; antennae honey yellow, darkened towards apex of third segment; arista brown; palpi black. Thorax with slight yellowish pruinescence on dorsum, propleura, fore coxae, and upper part of mesopleura white pruinescent. Abdomen shining black, with a slight olivaceous tinge. Legs black, tibiae and tarsi brownish yellow. Wings slightly yellowish. Calyptrae brownish yellow. Knobs of halteres pale yellow.

Frons over one-third of the head width at vertex, its anterior width a little less than equal to its length; anterior orbital distinctly shorter than the posterior one; face convex, with an oblique depression on each side one-third from mouth margin; antennae extending to or slightly beyond mouth margin, third segment at least four times as long as wide; arista short haired. Thorax with two pairs of dorsocentrals; prescutellar acrostichals distinct; four series of setulae between the dorsocentrals; sternopleura with one strong bristle. Inner cross-vein at middle of discal cell.

Length, 2.5 mm.

Type, Biscayne Bay, Fla. (Mrs. A. T. Slosson).

Melanomyza intermedia, sp. n.

This and the next species are so similar to *gracilipes* Loew that they have been found all standing under that name in nearly all collections examined. The only exception to this was in the material identified by Dr. Melander, and in that it was identi-

fied as *signatifrons* Coquillett, to which species it will run in Melander's key to *Sapromyza* and allies.

Apart from the structure of the genitalia of both sexes *intermedia* may readily be separated from *gracilipes* by the markings of the frons. In *gracilipes* there is a large subquadrate velvety black spot in middle of front margin of frons and the triangle is very short, not extending to middle of frons, while in *intermedia* there are two wedge-shaped velvety black spots in front between which the triangle extends rather broadly to the anterior margin.

Length, 3-4 mm.

Type, male, Glen Echo, August 8, 1921. Allotype, Cabin John, Md., July 31, 1921 (J. R. Malloch). Paratypes, a large series of specimens from the two localities above mentioned, District of Columbia, Falls Church, Va., and Illinois. Paratypes in the collections of Museum of Comparative Zoology, and Illinois Natural History Survey.

Melanomyza scutellata, sp. n.

More nearly resembles *intermedia* than *gracilipes*. Differs in the markings on frons. The orbits and triangle are not so distinctly shining as in *intermedia* and the triangle is very much attenuated anteriorly, reaching the anterior margin as a mere line while the shining part of the orbits is confined to a small round area at base of each bristle. The male and female genitalia differ from those of *intermedia* and *gracilipes*.

Length, 3-4 mm..

Type, male, and allotype, Cabin John, Md., July 31, 1921 (J. R. Malloch). Paratypes, from Glen Echo, Md., Little Falls, D. C., Conduit and Potomac Roads, Md., and several other localities near District of Columbia. Also occurs in Illinois and Kansas.

Sapromyzosoma, gen. n.

This genus differs from *Sapromyza* Fallen by the nature of the armature of the costa. The latter has the small black setulae, which give to the costa a thickened appearance, continued to apex of second vein, becoming weaker from there on and discontinued before reaching apex of third vein. In *Sapromyzosoma* these black setulae are continued to apex of third vein where they cease abruptly.

Unfortunately, in the "Canadian Entomologist," 1920, page 127, I inadvertently used the generic name *Sapromyzosoma* in connection with the description of *citreifrons* Malloch. This species must therefore be considered as the genotype though the present paper is the first to contain the generic definition.

Eusapromyza, gen. n.

This genus is distinguished from the foregoing, to which it is most closely related, by the presence of setulae on the third

wing vein extending for some distance from its base, and one or two hairs on pteropleura. Fourth wing-vein slightly curved forward apically.

Genotype, *Sapromyza multipunctata* Fallen (European).

***Sapromyza serrata* Malloch.**

Male.—Closely related to *quadri-lineata* Loew, having the thorax quadrivittate and the dorsum of abdomen marked with 4 series of large brown spots. The legs are banded with brown but the apices of tibiae are pale.

The fifth abdominal sternite has a pair of slender chitinised processes, the superior forceps of hypopygium are long, but not very slender, with their inner margins minutely serrate on apical third, and the inferior forceps are cleft at apices with the branches of dissimilar lengths.

Length, 4 mm.

Type, Rock Creek, Washington, D. C., June 15, 1913 (R. C. Shannon).

***Sapromyza obtusilamellata*, sp. n.**

Male.—Similar in color to *quadri-lineata* Loew, the apices of tibiae darkened.

The structural differences in the fifth sternite, which has two slender backward directed chitinised processes in this species which are absent in *quadri-lineata*, and in the form of the hypopygial forceps, the superior pair of this process being short and stout, and the inferior pair with the apical branches of almost equal size, which in *quadri-lineata* the superior forceps are long and slender, and the inferior pair have the apical branches unequal in size.

Length, 4 mm.

Type, and two paratypes, Glen Echo, Md., July 17, 1921; one paratype, topotypical, July 23 (J. R. Malloch).

***Sapromyza pictiventris*, sp. n.**

Male and *Female*.—Similar to *annulata* Melander in color, the abdomen having minute fuscous or brown dots at bases of the bristles on dorsum which are lacking in the three species dealt with above.

The fore femur has a comb of minute black setulae on apical third in this species and *annulata*, a character that is absent in the *quadri-lineata* group. The new species is darker in color than *annulata* and the superior hypopygial forceps of male are short and stout, with their apices concave.

Length, 3 mm.

Type, Rosslyn, Va., May 1, 1913. Allotype and one female paratype, topotypical, April 23, 1913 (R. C. Shannon). Paratypes, male, Vietch, Va., June 9, 1912 (J. R. Malloch), male, Hyattsville, Md., August 3, 1912 (F. Knab); one male, 2 females, Plummers Island, Md., April 28, 1914, 5 females, on and near Plummers Island, Md., May 30 to August 5, and one female, Dead Run, Fairfax Co., Va., May 19, 1916 (R. C. Shannon).

Sapromyza fusciventris, sp. n.

Male.—Fulvous, shining. Ocellar spot not darkened; third antennal segment blackened above; palpi fuscous. Thorax not vittate. Abdomen almost entirely fuscous. Wings hyaline, veins yellow. Legs yellow.

Ocellars longer than postverticals; frons nude; both pairs of orbitals long; third antennal segment about 1.5 as long as wide; arista short pubescent; cheek with short hairs. Thorax with four pairs of dorsocentrals and one pair of pre-scutellar acrostichals. Hypopygium with a rather broad flat process on each side below which is rounded at apex. Legs normal. Second section of costa fully half as long as first; last section of fourth vein about 1.5 as long as preceding section.

Length, 3 mm.

Type, Scotia, Cal., May 20. Paratype, Eureka, Cal., June 4 (H. S. Barber).

Resembles *vinnula* G. T., but that species has third antennal segment yellow and the tarsi fuscous.

Minettia americana, sp. n.

This species has been confused with *obscura* Loew from which it is distinguished by having four instead of three pairs of dorsocentral bristles. There are also slight differences in the male hypopygia of the two species. Both species have at times been indentified as *longipennis* Fallen, a European species which does not occur in America so far as I have been able to find.

Length, 4-5 mm.

Type, male, Plummers Island, Md., June 6, 1914, at light (Schwarz and Shannon). Allotype, Plummers Island, May 4, 1914 (R. C. Shannon). Paratypes, a large number of specimens from localities round Washington, in Virginia and Maryland, and also from Illinois. Paratypes in collections of Museum of Comparative Zoology and Illinois Natural History Survey.

Trivialia, subgen. n.

A subgenus of *Deceia*, with one sternopleural bristle and two pairs of dorsocentrals. Inner postalar bristle very weak, frons broader than long, eyes almost round, not narrowed below.

Genotype, the following species.

Trivialia fuscocapitata, sp. n.

Female, yellow, subopaque. Head except face fuscous. Wings clear. Legs yellow.

Both orbital bristles long and strong; ocellars minute, shorter than the cruciate postverticals; arista short haired above and below; third antennal segment about twice as long as wide. Legs normal, hind femur without a preapical antero-ventral bristle. Inner cross-vein slightly before middle of discal cell, last section of fourth vein about twice as long as preceding section.

Length, 2 mm.

Type, Virginia near Plummers Island, July 14, 1915 (W. L. McAtee).